

IN THE CLAIMS:

Please amend claims as follows:

Claims 1-128 are cancelled

129. (New) A method, comprising:

collecting a plurality of transmission events provided by one or more nodes of a network into one or more data structures; and

creating one or more characterization records for at least one data structure of said one or more data structures, one or more transmission events of said plurality of the transmission events being collected to said at least one data structure of said one or more data structures, wherein at least one of said one or more characterization records comprises one or more indicators of a location or locations of one or more data elements comprised in at least one of said one or more transmission events, to allow accessing said at least one of the one or more characterization records to determine said one or more indicators of the location or locations of said one or more data elements.

130. (New) The method of claim 129, wherein said collecting and said creating is performed by a site of a plurality of sites comprised in said network.

131. (New) The method of claim 129, wherein said one or more data elements are stored within said at least one data structure.

132. (New) The method of claim 129, wherein said collecting comprises creating observation records of said plurality of the transmission events and storing said observation records in said one or more data structures, such that said at least one data structure of said one or more data structures comprises one or more observation records of said observation records created using one or more transmission events of said plurality of the transmission events, said one or more observation records being generated using one or more characteristics of said one or more transmission events in order to allow entering said one or more observation records to determine whether at least one of said one or more characteristics is present in said at least one data structure.

133. (New) The method of claim 132, wherein said one or more characteristics of said one or more transmission events are one or more of: a period during which a transmission event of said one or more transmission events is occurred, and an internet protocol address of a node of said one or more nodes transmitted said transmission event.

134. (New) The method of claim 132, wherein said at least one of said one or more characterization records is an index created using said one or more observation records.

135. (New) The method of claim 129, wherein said at least one of said one or more characterization records is an index comprising one or more of: a type of or an importance level for a transmission event of said one or more transmission events of said plurality of the transmission events, an internet protocol address of a node of said one or more nodes transmitted said transmission event, and an internet protocol address of a node

of said one or more nodes being a destination of said transmission event.

136. (New) The method of claim 129, wherein said at least one of said one or more characterization records is an index indicating how to enter said at least one of said one or more transmission events unabridged.

137. (New) The method of claim 129, wherein said one or more characterization records comprise a summary of said one or more transmission events of said plurality of the transmission events.

138. (New) The method of claim 129, wherein at least one of said plurality of the transmission events is a notification.

139. (New) The method of claim 129, wherein said one or more data elements comprise partial or complete data comprised in said at least one of the one or more transmission events.

140. (New) The method of claim 129, further comprising:
storing said one or more data structures comprising corresponding said one or more characterization records in a memory, in a non-volatile memory or in a data storage.

141. (New) The method of claim 129, further comprising:
storing said one or more data structures with corresponding characterization records as a file system or as a hierarchical file system.

142. (New) The method of claim 129, wherein one of said one or more characterization records comprise an aggregate summary of

said at least one data structure and one or more of other data structures of said one or more data structures.

143. (New) The method of claim 129, wherein said network is configured to provide network activity data in a computer system comprising a plurality of nodes interconnected for communicating via said network.

144. (New) The method of claim 129, wherein all or selected transmission events of said plurality of the transmission events are notifications provided by all or selected nodes of said one or more nodes of said network.

145. (New) The method of claim 129, wherein said location or said locations of the one or more data elements are in said at least one data structure of said one or more data structures.

146. (New) The method of claim 129, further comprising:
performing compression of said at least one data structure.

147. (New) The method of claim 129, further comprising:
creating a digital signature of said at least one data structure.

148. (New) An apparatus comprising:
a first controller, configured to perform collecting a plurality of transmission events provided by one or more nodes of a network into one or more data structures; and
a second controller, configured to create one or more characterization records for at least one data structure of said one or more data structures, one or more transmission events of said plurality of the transmission events being collected to

said at least one data structure of said one or more data structures, wherein at least one of said one or more characterization records comprises one or more indicators of a location or locations of one or more data elements comprised in at least one of said one or more transmission events, to allow accessing said at least one of the one or more characterization records to determine said one or more indicators of the location or locations of said one or more data elements.

149. (New) The apparatus of claim 148, wherein said first controller is configured to perform said collecting by creating observation records of said plurality of the transmission events for storing said observation records in said one or more data structures, such that said at least one data structure of said one or more data structures comprises one or more observation records of said observation records created using one or more transmission events of said plurality of the transmission events, said one or more observation records being generated using one or more characteristics of said one or more transmission events in order to allow entering said one or more observation records to determine whether at least one of said one or more characteristics is present in said at least one data structure.

150. (New) The apparatus of claim 149, further comprising:

a memory, configured to store said one or more data structures and to store, for said at least one of said one or more data structures, said one or more observation records and said one or more characterization records.

151. (New) The apparatus of claim 149, wherein said one or more characteristics of said one or more transmission events are one

or more of: a period during which a transmission event of said one or more transmission events is occurred, an internet protocol address of a node of said one or more nodes transmitted said transmission event.

152. (New) The apparatus of claim 149, wherein said at least one of said one or more characterization records is an index created using said one or more observation records.

153. (New) The apparatus of claim 148, further comprising:
a memory, configured to store said one or more data structures comprising corresponding said one or more characterization records.

154. (New) The apparatus of claim 151, wherein said memory is a non-volatile memory or a data storage.

155. (New) The apparatus of claim 151, wherein said one or more data structures with corresponding characterization records are stored as a file system or as a hierarchical file system.

156. (New) The apparatus of claim 148, wherein said location or said locations of the one or more data elements are in said at least one data structure of said one or more data structures.

157. (New) The apparatus of claim 148, wherein said one or more data elements are stored within said at least one data structure.

157. (New) The apparatus of claim 148, wherein said at least one of said one or more characterization records is an index comprising one or more of: a type of or an importance level for

a transmission event of said one or more transmission events of said plurality of the transmission events, an internet protocol address of a node of said one or more nodes transmitted said transmission event, and an internet protocol address of a node of said one or more nodes being a destination of said transmission event.

158. (New) The apparatus of claim 148, wherein said at least one of said one or more characterization records is an index indicating how to enter said at least one of said one or more transmission events unabridged.

159. (New) The apparatus of claim 148, wherein said one or more characterization records comprise a summary of said one or more transmission events of said plurality of the transmission events.

160. (New) The apparatus of claim 148, wherein at least one of said plurality of the transmission events is a notification.

161. (New) The apparatus of claim 148, wherein said one or more data elements comprise partial or complete data comprised in said at least one of the one or more transmission events.

162. (New) The apparatus of claim 148, wherein one of said one or more characterization records comprise an aggregate summary of said at least one data structure and one or more of other data structures of said one or more data structures.

163. (New) The apparatus of claim 148, wherein all or selected transmission events of said plurality of the transmission events

are notifications provided by all or selected nodes of said one or more nodes of said network.

164. (New) The apparatus of claim 148, wherein said location or said locations of the one or more data elements are in said at least one data structure of said one or more data structures.

164. (New) A computer software product, comprising a computer-usable medium having computer readable instructions stored thereon for execution by a processor to perform a method comprising:

collecting a plurality of transmission events provided by one or more nodes of a network into one or more data structures; and

creating one or more characterization records for at least one data structure of said one or more data structures, one or more transmission events of said plurality of the transmission events being collected to said at least one data structure of said one or more data structures, wherein at least one of said one or more characterization records comprises one or more indicators of a location or locations of one or more data elements comprised in at least one of said one or more transmission events, to allow accessing said at least one of the one or more characterization records to determine said one or more indicators of the location or locations of said one or more data elements.

165. (New) The computer software product of claim 164, wherein said one or more data elements are stored within said at least one data structure.

166. (New) The computer software product of claim 164, wherein said collecting comprises creating observation records of said plurality of the transmission events and storing said observation records in said one or more data structures, such that said at least one data structure of said one or more data structures comprises one or more observation records of said observation records created using one or more transmission events of said plurality of the transmission events, said one or more observation records being generated using one or more characteristics of said one or more transmission events in order to allow entering said one or more observation records to determine whether at least one of said one or more characteristics is present in said at least one data structure.

167. (New) The computer software product of claim 166, wherein said one or more characteristics of said one or more transmission events are one or more of: a period during which a transmission event of said one or more transmission events is occurred, and an internet protocol address of a node of said one or more nodes transmitted said transmission event.

168. (New) The computer software product of claim 166, wherein said at least one of said one or more characterization records is an index created using said one or more observation records.

169. (New) The computer software product of claim 164, wherein said at least one of said one or more characterization records is an index comprising one or more of: a type of or an importance level for a transmission event of said one or more transmission events of said plurality of the transmission events, an internet protocol address of a node of said one or more nodes transmitted said transmission event, and an internet

protocol address of a node of said one or more nodes being a destination of said transmission event.

170. (New) The computer software product of claim 164, wherein said at least one of said one or more characterization records is an index indicating how to enter said at least one of said one or more transmission events unabridged.

171. (New) The computer software product of claim 164, wherein said one or more characterization records comprise a summary of said one or more transmission events of said plurality of the transmission events.

172. (New) The computer software product of claim 164, wherein at least one of said plurality of the transmission events is a notification.

173. (New) The computer software product of claim 164, wherein said one or more data elements comprise partial or complete data comprised in said at least one of the one or more transmission events.

174. (New) The computer software product of claim 164, wherein said method further comprises:

storing said one or more data structures comprising corresponding said one or more characterization records in a memory, in a non-volatile memory or in a data storage.

175. (New) The computer software product of claim 164, wherein said method further comprises:

storing said one or more data structures with corresponding characterization records as a file system or as a hierarchical file system.

176. (New) The computer software product of claim 164, wherein one of said one or more characterization records comprise an aggregate summary of said at least one data structure and one or more of other data structures of said one or more data structures.

177. (New) The computer software product of claim 164, wherein all or selected transmission events of said plurality of the transmission events are notifications provided by all or selected nodes of said one or more nodes of said network.

176. (New) The computer software product of claim 164, wherein said location or said locations of the one or more data elements are in said at least one data structure of said one or more data structures.

178. (New) The computer software product of claim 164, wherein said method further comprises:
performing compression of said at least one data structure.

180. (New) The computer software product of claim 164, wherein said method further comprises:
creating a digital signature of said at least one data structure.